Updates in Corneal Collagen Crosslinking
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Course Outline:

I. Overview of Procedure
   A. Historical beginnings of collagen crosslinking
   B. Component parts
      1. UV light
         a. 370nm
      2. Riboflavin
         b. B-2 molecule
      3. Generation of covalent bonds
   C. Effects on corneal tissue
      1. Corneal absorption profile
      2. Endothelial toxicity levels
      3. Lenticular toxicity levels
      4. Physiologic benefits
   D. Role of epithelium
      1. Historical context
      2. Current trends
   E. US FDA Studies: History/Current Status

II. Patient Selection
   A. Corneal Condition
      1. Keratoconus
      2. Post-LASIK ectasia
      3. Pellucid
      4. Post-RK
      5. Bullous keratopathy
      6. Infectious keratitis
   B. Age
   C. Corneal thickness
   D. Degree of severity
      1. Ectasia
      2. Infection/scarring

III. Outcomes (Published literature)
   A. European Data: KCN/Ectasia
      1. Dresden Studies
      2. Other long-term studies
   B. Combination therapies
      1. Sequential vs. Simultaneous
      2. With PRK
      3. With Intacs
   C. European Data: Other corneal conditions
IV. Twists to technology
   A. “Rapid” CXL
      1. Adjustment to riboflavin molecule
      2. Adjustments to UV energy levels
   B. Other